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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 27

Application Number: 09/353,583
Filing Date: July 15, 1999
Appellant(s): REICHGOTT ET AL.

Steven L. Nichols
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 09/05/2003.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences, which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

Appellant's brief includes a statement that these grouping of claims are stand or fall together.

1. Claims 1-4, 6, 9-17, 24-27, 29-37 and 39-42 stand or fall together.
2. Claims 7, 8, 43 and 44 stand or fall together.
3. Claims 18, 19, 21-23 and 36-40 stand or fall together.
4. Claim 41 stands alone.
5. Claims 5 and 28 stand or fall together.
6. Claims 20 and 38 stand or fall together.
7. Claims 45 and 46 stand or fall together.

(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) *Prior Art of Record*

5,440,632	Bacon et al.	8-1995
5,497,187	Banker et al.	03-1996
5,373,557	Diehl et al.	12-1994
5,619,250	McClellan et al.	04-1997
5,987,210	Iggulden et al.	11-1999
6,141,683	Kraml et al.	10-2000
4,636,942	Chen et al.	01-1987

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-4, 6-17, 24-27, 30-35 and 41-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bacon et al. (US 5440632) in view of Banker et al. (US 5497187).

Regarding claim 1, Bacon discloses a set-top terminal (Fig. 2A-B) for connecting a subscriber to a cable network, the terminal comprising:

A processor 128; and

A memory unit 134, 137 and 138,

Wherein the processor only accepts the download on the specified in-band channel and records the download in the memory unit when one or more predetermined criteria are satisfied (Col. 14, lines 65+), and wherein the criteria when satisfied indicates that acceptance of the download will cause a minimum of interference (Col. 16, lines 34-37) with the subscriber's use of the set-top terminal (Fig. 9 and Col. 15, lines 25-Col. 16, lines 12).

As to limitation "Wherein the processor monitors an out-of-band control channel of the cable network for information indicating that a download of data or programming is available and indicating a specified in-band channel for receiving the download of data or programming offered to the set-top terminal over the cable network", Bacon discloses "control data downloaded from the system manager 12 (by any of the three data transmission schemes discussed herein, out-of-band, in-band audio or in-band video)" see Col. 8, lines 17-50. Moreover, Bacon's microprocessor 128 executes a control program (Col. 8, lines 30-50) to verify the "convenience flag" which indicates that a download of data or programming is available (Col. 16, lines 20-22), to verify Bytes 16 and 17 from the download parameters transaction Fig. 3A-D which indicate the frequency channel (in-band channel) on which the download program code will be transmitted (Col. 9, lines 65+) and Byte 19 is indication of whether the system is commanding an immediate software download or whether the downloading should occur sometime in the future (Col. 10, lines 2-5). In order to receive and process the control data, as discussed, Bacon's system must monitor the control channel. Thus, Bacon's system meets the claimed limitation "the processor monitor a control channel of the cable network for information indicating that a download of data or programming is available (Col. 16, lines 21-22) and indicating a specified in-band channel for receiving the download of data or programming offered to the set-top terminal over the cable network (Col. 9, lines 65-68).

As to whether Bacon 's control data is carried over an out-of-band control channel of the cable network, Bacon does not clearly disclose about it; However, Bacon discloses the control process of the control data for verifying Bytes 16, 17 and 19 from the download parameters transaction Fig. 3A-D which indicate the frequency channel (in-band channel) on which the download program code will be transmitted (Col. 9, lines 65+).

Banker teaches that control data is transmitted over out-of-band channel (Col. 8, lines 60-Col. 9, lines 33) and receiver Fig. 4 for receiving In-Band (IB) and Out-of-Band (OB) data. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bacon to have out-of-band control channel to carry control data, as taught by Banker, so greatly increase the data throughput from the Headend to signal distribution apparatus or terminal (Col. 3, lines 43-46).

Regarding claim 2, Bacon further discloses wherein one or more criteria are downloaded to the set-top terminal of the cable network (see Fig. 1).

Regarding claim 3, Bacon further discloses wherein the set-top terminal verifies that the data or programming offered as the download is not already resident in the memory (Col. 15, lines 47-Col. 16, lines 12).

Regarding claim 4, Bacon further discloses wherein the set-top terminal verifies that the data or programming offered as the download is specified as being intended for a class of terminals to which the set-top terminal belongs (Col. 10, lines 54-60).

Regarding claim 6, Bacon further discloses wherein the one or more criteria include whether the set-top terminal is turned off (Col. 16, lines 12-19).

Regarding claim 7, Bacon further discloses wherein the one or more criteria include a deadline by which acceptance of the download is required by an operator of the cable network (Col. 15, lines 57-63). Bacon's system operator has the option to set or not to set the "immediate flag"; if the "immediate flag" is not set in block A72, the program will flow to block A76 wherein the subscriber "**convenience** flag" is set to be downloaded later (a specific point in time subsequent to an initial offering) before the program exit (see Fig. 10 and Col. 16, lines 6-42). As to the "deadline" limitation is met by Bacon disclosure "the control microprocessor 128 will then wait for the subscriber key input in block A86, or after a time out period (deadline), will accept the lack of key input as an affirmative response and branch to either to block A90 or A94 depending on the response". Thus, Bacon encompasses the claim's limitation "said deadline being a specific point in time subsequent to an initial offering of said download of data or programming".

Regarding claim 8, Bacon further discloses wherein the set-top terminal defers the deadline if the set-top terminal is used to provide a dedicated services including recording programming in conjunction with a VCR or providing pay-per-view programming (Col. 16, lines 1-5).

Regarding claim 9, Bacon further discloses wherein the set-top terminal signals the subscriber that the download is available and requests permission to

accept the download, the one or more criteria including a positive response by the subscriber to request for permission to accept the download (Col. 16, lines 16-42).

Regarding claim 10, Bacon further discloses wherein the set-top terminal tunes to the specified in-band channel to receive the download if the one or more criteria are satisfied (Col. 9, lines 66-68 and Col. 15, lines 16-21).

Regarding claim 11, Bacon further discloses wherein if the one or more criteria are satisfied, the processor erases information in the memory unit and replaces the erased information with data or programming from the download (Col. 14, lines 65-Col. 15, lines 13).

Regarding claim 12, Bacon further discloses wherein following the download of programming, the processor will only execute newly received programming from the download when one or more predetermined criteria are satisfied (Col. 15, lines 21-26).

Regarding claim 13, Bacon further discloses wherein prior to accepting the download, the processor determines whether any programming is stored in the memory (Flash) which is not being executed, but which is identified as being a later version than programming being executed by the processor at that time; if the processor locates any such later version of programming in memory (Flash), the processor will terminate execution of programming being executed, erase the terminated programming from memory and reset so to as execute the later version of the programming (Col. 13, lines 68-Col. 14, lines 65).

Regarding claim 14, see analysis of claim 11.

Regarding claim 15, Bacon further discloses wherein the memory unit is logically partitioned into two sections, a first section for containing programming being executed by the processor and a second section for receiving and storing programming from the download (Fig. 6).

Regarding claim 16, Bacon further discloses wherein each download of programming contains two versions of a programming object, a first programming object for storage in and execution from a first memory section of the memory unit ROM and a second programming object for storage in and execution from a second memory section EPROM, of the memory unit wherein the processor downloads one of the two versions of programming in accordance with whether the first and second memory sections is vacant (Fig. 6; Col. 13, lines 5-65).

Regarding claim 17, Bacon further wherein the memory unit comprises two separate memory devices (ROM, EPROM), a first memory device for containing programming being executed by the processor (ROM) and a second memory device for receiving and storing programming from the download (EPROM) (Col. 13, lines 54-65).

Regarding claims 24, method claim 24 corresponds to the apparatus claim 1 and is analyzed with respect to claim 1.

Regarding claim 25, method claim 25 is analyzed with respect to claim 2.

Regarding claim 26, method claim 26 is analyzed with respect to claim 3.

Regarding claim 27, method claim 27 is analyzed with respect to claim 4.

Regarding claim 30, method claim 30 is analyzed with respect to claim 9.

Regarding claim 31, method claim 31 is analyzed with respect to claim 12.

Regarding claim 32, method claim 32 is analyzed with respect to claim 13.

Regarding claim 33, method claim 33 is analyzed with respect to claim 11.

Regarding claim 34, method claim 34 is analyzed with respect to claim 15.

Regarding claim 35, method claim 35 is analyzed with respect to claim 16.

Regarding claim 41, the set-top terminal claimed is analyzed with respect to claim 1.

Bacon and Banker does not clearly disclose the set-top terminal has a processor unit comprising two/dual processors in which one processor is dedicated to perform a task of providing user interface and the other processor perform the management of downloading.

Official Notice is taken that it is common to supplement the primary/main processor with specialized or dedicated second processors designed specifically to perform specific tasks in certain multiprocessors computer is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bacon in view of Banker by having a dual-processor system as claimed so to be able to perform simultaneously two or more computer tasks thereby to achieve high speed processing power and further obviates the need to halt the primary processor and as a result system throughput/performance is enhanced.

Regarding claim 42, Bacon further discloses wherein the programming is received in packets (Program code transaction, Fig. 4; Col. 9, lines 25-28), the

terminal being configured to reassemble the packets (program code transaction) into an executable object and stored into non-volatile memory (Col. 10, lines 45-50 and Col. 15, lines 19-25).

Regarding claim 43, apparatus claim 43 is analyzed with respect to apparatus claim 1.

Regarding claim 44, claim 44 is analyzed with respect to claim 8.

2. Claims 5 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bacon et al. (US 5440632) in view of Banker et al. (US 5497187) and further in view of Diehl et al. (US 5,373,557).

Regarding claims 5 and 28, Bacon and Banker do not specifically show wherein the one or more criteria include a time of day.

Diehl shows a time of day criteria is included in the download of data (Col. 1, lines 55-60 and Col. 3, lines 5-18). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bacon in view of Banker by including a time of day criteria, as taught by Diehl, in order to determine the possibility time to download during the off peak hours of use (Col. 2, lines 6-17).

3. Claims 18-19, 21-23, 29, 36-37 and 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bacon et al. (US 5440632) in view of Banker et al. (US 5497187) and further in view of McClellan et al. (US. 5,619,250).

Regarding claim 18, see analysis of claim 1 in combination with claim 12.

Bacon and Banker do not clearly disclose "the processor will only execute the new programming when one or more predetermined criteria are satisfied that indicate executing the new programming will not inconvenience the subscriber."

McClellan discloses the processor will only execute the new programming when one or more predetermined criteria are satisfied (new module are fully functional) that indicate executing the new programming will not inconvenience the subscriber (execute the new module without restarting the system; Col. 7, lines 23-35).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify Bacon in view of Banker to execute new downloaded program when the operating system determines that the new downloaded program is fully functional and will not inconvenient the subscriber by not restarting the set-top box, as taught by McClellan, so to do not interrupt any current TV program being viewed.

Regarding claims 19, 29 and 37, Bacon further discloses wherein the one or more criteria include whether the set-top terminal is turned off (Col. 16, lines 12-19).

Regarding claims 21 and 39, Bacon further discloses wherein the one or more criteria include a deadline by which acceptance of the download is required by an operator of the cable network (Col. 15, lines 57-63). Bacon's system operator has the option to set or not to set the "immediate flag"; if the "immediate flag" is not set in block A72, the program will flow to block A76 wherein the subscriber "**convenience** flag" is set to be downloaded later (a specific point in time

subsequent to an initial offering) before the program exit (see Fig. 10 and Col. 16, lines 6-42). As to the "deadline" limitation is met by Bacon disclosure "the control microprocessor 128 will then wait for the subscriber key input in block A86, or after a time out period (deadline), will accept the lack of key input as an affirmative response and branch to either to block A90 or A94 depending on the response".

Thus, Bacon encompasses the claim's limitation "said deadline being a specific point in time subsequent to an initial offering of said download of data or programming".

Regarding claims 22 and 40, Bacon further discloses wherein the set-top terminal defers the deadline if the set-top terminal is used to provide a dedicated services including recording programming in conjunction with a VCR or providing pay-per-view programming (Col. 16, lines 1-5).

Regarding claim 23, McClellan further discloses that subscriber usually has to request/prompt to restart the set-top box in order to reset the set-top box to new configuration (Col. 3, lines 19-23).

Regarding claim 36, method claim 36 corresponds to the apparatus claim 18; therefore they are analyzed as discussed with respect to claim 18.

4. Claims 20 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bacon et al. (US 5440632) in view of Banker et al. (US 5497187) and further in view of McClellan et al. (US. 5,619,250) and further in view of Iggulden et al. (US 5,987,210).

Regarding claim 20, Bacon, Banker and McClellan fail to disclose that one or more criteria include detection of commercial break in television programming being received by set top terminal.

Iggulden shows a processor (114) for processing the video signal to detect the presence of commercial messages (Fig.1). Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify Bacon in view of Banker and McClellan by inserting a video event detector to detect the criteria for commercial break, as taught by Iggulden, in order to control the operation of a video recording and playback device so as to automatically eliminate commercial messages during playback of a recorded television signal.

Regarding claim 38, see analysis of claim 20.

5. Claims 45-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bacon et al. (US 5440632) in view of Banker et al. (US 5497187) and further in view of Kraml et al. (US 6141683).

Regarding claim 45, Bacon discloses a method of operating a set-top terminal (Fig. 2A-B) for connecting a subscriber to a cable network, wherein the set-top terminal comprises a processor 128 and a memory unit 134, 137 and 138, the memory unit storing program that is executed by the processor during operation of the set-top terminal (see Abstract). Bacon further discloses executing the newer version of the programming upon start-up of the set-top terminal (Col. 13, lines 54-Col. 15, lines 26).

Bacon and Banker do not clearly disclose the memory unit further comprises at least two versions of the programming, a newer version and an older version, receiving a command via the cable network to switch versions of the programming and termination of the newer version of the programming and beginning execution of the older version of the programming in response to receipt of the command.

Kraml discloses a remote computer with memory unit comprises at least two versions of the programming (Col. 5, lines 22-27 and lines 45-57), executing the newer version ($n+1$ store in 1st memory) of the programming upon start-up of the set-top terminal (Col. 6, lines 22-28), receiving a command via the cable network to switch versions of the programming and termination of the newer version of the programming (at step 417 loop back to 411, follow to step 412 then loop back to 405, control center 210 transmits a command to remote computer 230 directing computer 230 to store the address of location of version n into pointer 330, see Col. 6, lines 47-61 and then, follow to step 406, 407, 408) and beginning execution of the older version of the programming in response to receipt of the command (at step 414 then stop if older software does not crash (Fig. 4).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify Bacon in view of Banker with the teaching of Kraml so to enhance the capability of installing a new version of software application in the remote set-top box while the remote set-top box is executing an older version of the software application or installing a new version of software application into the memory without overwriting the old version in such a manner that during the

execution of the new version of the software application and if the new version of the software application crashes for any reason, the remote terminal/set-top box can begin using the old version of the software immediately and needs not suspend operation while the new version of the software application is being retransmitted and re-installed (see Col. 3, lines 50-65 and summary).

Regarding claim 46, Kraml further discloses erasing the newer version of programming from the memory (until the newest version can be installed or re-installed over the crashed software version) and restarting the remote terminal to begin execution of the older version of programming (Col. 3, lines 50-65 and Col. 7, lines 37-43).

(11) Response to Argument

Claims 1-4, 6, 9-17, 24-27, 29-36, 37 and 39-41, 42 stand or fall together.

- Claims 1, 24, 43, Appellant argues, "Bacon does not teach or suggest the claimed monitoring of an out-of-band channel that broadcasts an alert that new programming is available on a separate, specific in-band channel."

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., ...that broadcasts an alert that...) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification,

limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Also include that Bacon teaches monitoring out-of-band that program is another on In-band Channel.

- Appellant argues, "Bacon fails to teach or suggest a set-top terminal with a processor that monitors an out-of-band control channel for obtaining information indicating that a download of data or programming is available on a specified in-band channel."

In response, Bacon discloses that "download program code parameters" or "download program code parameters transaction" or "control code" is transmitted from the headend to the subscriber terminals could be distributed over **any** of the three data transmission schemes, i.e. out-of-band, in-band audio or in-band video (Fig. 1, Col. 2, lines 16-Col. 3, lines 30; Col. 5, lines 44-65 and Col. 8, lines 17-29). Note, "a control channel" reads on channel that "data", "a transaction parameter", "download program code parameters", "download program code parameters transaction", or "control code" is transmitted from the headend to the subscriber terminals could be distributed over **any** of the three data transmission schemes, i.e. out-of-band, in-band audio or in-band video (Fig. 1, Col. 2, lines 16-Col. 3, lines 30; Col. 5, lines 44-65 and Col. 8, lines 17-29).

Bacon (Fig. 9) further shows a program code in which a processor 128 executes, in block A62, the processor detects an interrupt from the MCC 104

(Fig. 2A-B) that indicates that it has data or possibly a transaction parameter/control data for the processor to process in order to determine to download or not to download the available "new data/software" to the subscriber terminal. Note, "monitor" reads on the processor detects an interrupt from the MCC 104 because the processor has to monitor in order to detect something. (Col. 11, lines 60-Col. 12, lines 8 and Col. 15, lines 34-40).

Moreover, Bacon's microprocessor 128 executes a control program (Col. 8, lines 30-50) to process the "transaction parameter", "download program code parameters", "download program code parameters transaction", or "control code" of Fig. 3A-D by verifying Byte 6 with the current Kernel version of the subscriber terminal (Col. 15, lines 45-47), Byte 13 with the current code revision of the subscriber terminal (Col. 52-65+), obtaining information from Bytes 16 and 17 that indicate the frequency channel (in-band channel) on which the download program code will be transmitted (Col. 9, lines 65+), processing Byte 19 for indicating of whether the system is commanding an immediate software download or whether the downloading should occur sometime in the future (Col. 10, lines 2-5) and verifying the "convenience flag" setting in order to indicate that a "new software is available" for downloading (Col. 16, lines 20-22). As noted, Bacon throughout the reference uses in-band channel signaling for transmitting data from the headend to the subscriber terminals. Thus, Bacon meets the claimed limitation "a processor that monitors a control channel for

information indicating that a download of data or programming is available on a specified in-band channel".

As to "out-of-band control channel", Bacon does not clearly disclose it; however, Bacon suggests that out-of-band channel could be used to carry control code/data to the subscriber terminal.

Banker teaches that control data is transmitted over out-of-band channel (Col. 8, lines 60-Col. 9, lines 33) and receiver Fig. 4 for receiving In-Band (IB) and Out-of-Band (OB) data. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bacon to have out-of-band control channel to carry control data, as taught by Banker, so greatly increase the data throughput from the Headend to signal distribution apparatus or terminal (Col. 3, lines 43-46).

- Appellant further argues that neither Bacon nor Banker teaches that "a control signal on an out-of-band channel refers a set-top terminal to programming being downloaded over a specified in-band channel".

In response, Bacon's control code/ transaction parameter/download program code parameters/download program code parameters transaction is a control signal transmits on a control channel refers a set-top terminal (Col. 2, lines 23-58; Col. 3, lines 5-30) in which Fig. 3A-D is a representation structure of a control code/ transaction parameter/download program code parameters/download program code parameters transaction in which Byte 16 and 17 indicate the frequency of the in-band channel that the downloadable

program will be transmitted, noting that the frequency indicated by Bytes 16 and 17 equates to the In-band channel.

Claims 7, 8, 43 and 44 stand or fall together.

- Claim 7, Appellant argues, "there is no 'deadline' at which download is required as claimed."

In response, the Examiner cites "... the control microprocessor 128 will then wait for the subscriber key input in block A86, or after a time out period, will accept the lack of a key input as an affirmative response..."

Note, Appellant's limitation "deadline" reads on Bacon's time out period (Col. 16, lines 20-42).

Claims 18, 19, 21-23 and 36-40 stand or fall together.

- Claim 18, Appellant states, "The recent Office Action concedes that Bacon and Banker fail to teach or suggest delaying execution of new programming based on criteria indication that a subscriber will not be inconvenience."

In response, after carefully review the previous Office Action, the Examiner respectfully disagrees with Appellant's above statement because in the rejected claim 18, the Examiner does not indicate, "Bacon and Banker fail to teach or suggest delaying execution of new programming based on criteria indication that a subscriber will not be inconvenience." But instead, the Examiner states, "...Bacon and Banker do not clearly disclose "the processor will only execute the new programming when one or more predetermined criteria are

satisfied that indicate executing the new programming will not inconvenience the subscriber.”

- Appellant argues, “McClellan does not teach or suggest any criteria that indicate whether a user will be inconvenienced by implementation of new programming”

In response, the Examiner respectfully disagrees with Appellant because Claim 18 recites “...Wherein following said download of programming, said processor will only execute said new programming from said download when one or more predetermined criteria are satisfied that indicate executing said new programming will not inconvenience said subscriber” and the feature upon which applicant relies (i.e., ... whether a user **will be** inconvenienced by implementation of new programming) is not recited in the rejected claim.

- Appellant further argues, “McClellan does not teach or suggest that implementation of new programming may be delayed for any such reason.”

In response, the Examiner again respectfully disagrees with Appellant because, the feature upon which applicant relies (i.e., ...implementation of new programming may be delayed for any such reason) is not recited in the rejected claim 18.

- Appellant further argues, “McClellan does not indicate that a user is not inconvenienced by the downloading process, merely that no interaction from the user is needed.”

In response, the Examiner again respectfully disagrees with Appellant because Appellant argues on issue “a user is not inconvenienced by the downloading process” that is not recited in the rejected claim 18.

- Appellant further argues, “McClellan does not teach or suggest that the execution of the new programming may be delayed until one or more criteria are satisfied that indicate executing the new programming will not inconvenience the subscriber.”

In response, the Examiner again respectfully disagrees with Appellant because, the feature upon which applicant relies (i.e., ... the execution of the new programming may be delayed until one or more criteria are satisfied that indicate executing the new programming will not inconvenience the subscriber) is not recited in the rejected claim 18.

- Claim 36, Appellant argues, Bacon and McClellan do not teach “commencing execution of said upgraded programming only when one or more predetermined criteria are satisfied.”

In response, the Examiner respectfully disagrees because McClellan teaches once the new module is downloaded, the system (processor) will

execute the new modules that are fully functional in which the user does not need to restart the system. Thus, "only when one or more predetermined criteria are satisfied," reads on new modules are fully functional. In other word, by fully functional, the new modules satisfy the condition/criteria of not having any errors (Col. 7, lines 30-35).

Claim 41 stands alone.

- Appellant argues that "there is no such prior art of record" to have a teaching of having a dual-processor system to perform a specific division of duties for the two processors.

In response, the Examiner cites Chen et al. (US 4,636,942) show a multi-processors system permits multitasking in the multiprocessor, in which the shared registers allow independent tasks of different jobs or related tasks of a single job to be run concurrently (Abstract; Fig. 12; Col. 5, lines 50-65+) to support the rejection of claim 41 (paper No. 23, p.8). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bacon in view of Banker by having a dual-processor system as claimed so to be able to perform simultaneously two or more computer tasks thereby to achieve high speed processing power.

Claims 5 and 28 stand or fall together.

- Appellant argues, "Diehl does not teach or suggest accepting a data download based on time of day."

In response, the Examiner respectfully disagrees with Appellant because Diehl teach accepting data download based on time of day. The Examiner cites, "each night, at a given hour (a so called "wake up" hour) every decoder in the system tunes to a predetermined video or audio channel, so called "Barker channel"...The program provider can then send the maximum of entitlements on the Barker channel, knowing that every activated decoder will be "listening to" its data stream..." (Col. 1, lines 50-65+; Col. 2, lines 2-17 and lines 63-Col. 3, lines 10).

- Appellant further argues, "Diehl does not teach or suggest monitoring an out-of-band channel for information indicating the availability of data or programming on a specified in-band channel and accepting new programming based, in part, on the time day such programming is offered."

In response, the Examiner respectfully disagrees with Appellant because Appellant cannot show non-obviousness by attacking references individually where the rejections are based on combinations of references.

In this case, the rejection of claims 5 and 28 is based on Bacon in view of Banker and further in view of Diehl.

As analyzed with respect to Claim 1 in combination with claim 4 (see above Rejection) Bacon in view of Banker meet all the limitations as claimed by Appellant, but “the one or more criteria include a time of day”.

Diehl shows a time of day criteria is included in the download of data (Col. 1, lines 55-60 and Col. 3, lines 5-18). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bacon in view of Banker by including a time of day criteria, as taught by Diehl, in order to determine the possibility time to download during the off peak hours of use (Col. 2, lines 6-17).

Claims 20 and 38 stand or fall together.

- Appellant argues that Claim 20 recites, “the one or more criteria [for accepting a download] include detection of a commercial break in television programming being received by said top terminal” and further argues “As acknowledged by the Office Action, Bacon, Banker and McClellan fail to teach or suggest using detection of a commercial break as a criterion for accepting a download of a new data or programming (paper No. 23, p.12).”

In response, after carefully review the previous Office Action (paper No.23, p.12)”, the Examiner respectfully disagrees with Appellant’s above statement because in the rejected claim 20, the Examiner does not indicate, “Bacon, Banker and McClellan fail to teach or suggest using detection of a

commercial break as a criterion for accepting a download of a new data or programming". But instead, the Examiner states, "Bacon, Banker and McClellan fail to disclose that one or more criteria include detection of commercial break in television programming being received by set top terminal."

Moreover, Claim 20 does not recite the feature upon which applicant relies (i.e., ...[for accepting a download]...) is not recited in the rejected claim 20 and 38. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims.

- Appellant further argues, "Iggulden fails to teach or suggest monitoring an out-of-band channel for information indicating the availability of data or programming on a specified in-band channel and accepting new programming based, in part, on the detection of a commercial break."

In response, as to argument "accepting new programming based, in part, on the detection of a commercial break", the Examiner respectfully disagrees with Appellant because after carefully review Appellant's claims 18 and 20 (Claim 20 depends on claim 18), the Examiner could not find the feature upon which applicant relies (i.e., "accepting new programming based, in part, on the detection of a commercial break"), but rather limitation of claim 20 (Claim 20 depends on claim 18) recites "...wherein **following** said download of programming, said processor will only execute said new programming from said

download when one or more criteria are satisfied... wherein said one or more criteria include detection of a commercial break in television programming being received by said set-top terminal.” Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims

In response to argument “Iggulden fails to teach or suggest monitoring an out-of-band channel for information indicating the availability of data or programming on a specified in-band channel”, the Examiner respectfully disagrees with Appellant because Appellant cannot show non-obviousness by attacking references individually where the rejections are based on combinations of references.

In this case, the rejection of claim 20 (depends on claim 18) and claim 38 (depends on 36) are based on Bacon in view of Banker, and further in view McClellan in which, Bacon, Banker, and McClellan meet the claimed argument “monitoring an out-of-band channel for information indicating the availability of data or programming on a specified in-band channel” in which is analyzed with respect to Claims 18 or 38.

Bacon, Banker and McClellan fail to disclose, “one or more criteria include detection of commercial break in television programming being received by set top terminal.”

Iggulden shows a processor (114) for processing the video signal to detect the presence of commercial messages (Fig.1). Therefore, it would have been

obvious to one of ordinary skill in the art, at the time the invention was made, to modify Bacon in view of Banker and McClellan by inserting a video event detector to detect the criteria for commercial break, as taught by Iggulden, in order to control the operation of a video recording and playback device so as to automatically eliminate commercial messages during playback of a recorded television signal.

Claims 45 and 46 stand or fall together.

- Appellant states, "As acknowledge by the Office Action, Bacon and banker fail to teach or suggest a method in which a system controller can send a command to terminate execution of one programming version ... (paper No. 23, p. 13). Adding the teaching of Kraml does not remedy this deficiency."

In response, the Examiner respectfully disagrees with Appellant statement because nowhere in paper No. 23, p. 13, the Examiner acknowledges that Bacon and banker fail to teach or suggest a method in which a system controller **can't send** a command (control data/signal) to subscriber terminal. On the contrary, Bacon and Banker both teach a system controller (headend) **sends** a control data/signal (command) to the subscriber terminal so to perform certain function as disclosed (see analysis of Claim 1). The Office Action states clearly "Bacon and Banker do not clearly disclose ... receiving a command via the cable network to switch versions of the programming and

termination of the newer version of the programming and beginning execution of the older version of the programming in response to receipt of the command.

- Appellant further argues, "Kraml does not teach or suggest a method in which a system controller can send a command to terminate execution of one programming version and initiate execution of another version by a network device."

In response, Kraml discloses (Fig. 2) a network 220 with a Control Center 210 connects to remote computer 230, in which a remote computer 230 with memory unit comprises at least two versions of the programming (Col. 5, lines 22-27 and lines 45-57), executing the newer version ($n+1$ store in 1st memory) of the programming upon start-up of the set-top terminal (Col. 6, lines 22-28), receiving a command via the cable network to switch versions of the programming and termination of the newer version of the programming (at step 408, if the current software version is corrupted, the remote computer, at step 409, sends a message indicating of current software is corrupted or not nominal to the step 410 at the control center 210. At step 410, the control center 210 follows to step 411 and check, is another version n (previous version of $n+1$) of software application in memory of the remote computer? When it does, the control center 210 sends a command to remote computer 230 directing computer 230 to store the address of location of version n into pointer 330 (see Col. 6, lines 47-61) and at the mean time follows to step 405, 406, 407, 408, 414 and loop

415 to reboot and begin execution (to terminate execution of one programming version and initiate execution) of the older version n (of another version) of the programming (see Fig. 4 flowchart).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify Bacon in view of Banker with the teaching of Kraml so to enhance the capability of installing a new version of software application in the remote set-top box while the remote set-top box is executing an older version of the software application or installing a new version of software application into the memory without overwriting the old version in such a manner that during the execution of the new version of the software application and if the new version of the software application crashes for any reason, the remote terminal/set-top box can begin using the old version of the software immediately and needs not suspend operation while the new version of the software application is being retransmitted and re-installed (see Col. 3, lines 50-65 and summary).

For the above reasons, it is believed that the rejections should be sustained.

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Respectfully submitted,

Ht:ht
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